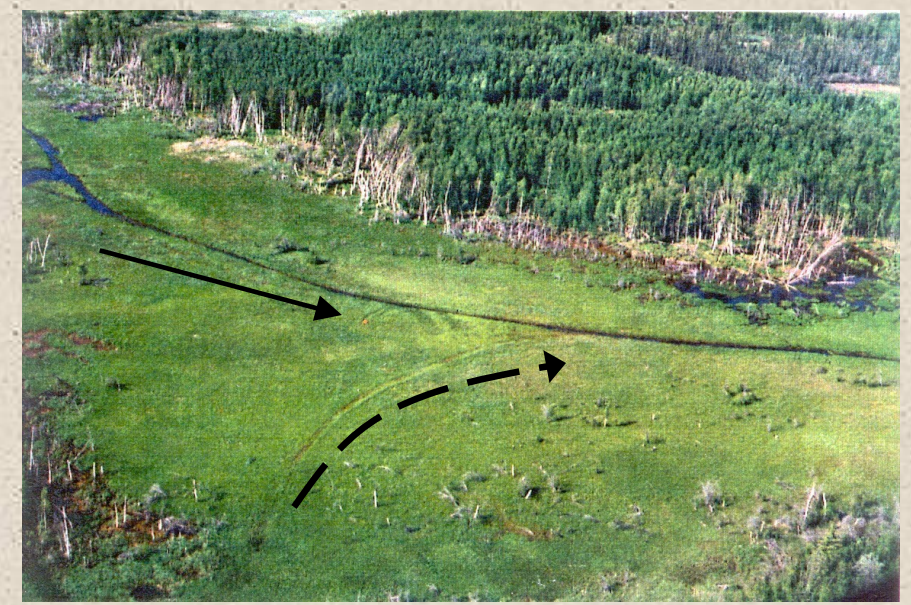
Monitoring Airboat Trails in the Tanana Flats: Fort Wainwright, Alaska

Presentation Outline

- **ISSUE** – Airboat Trails through Wetlands
- **SURVEYS**
  - Dates
  - Methods
- **TRAIL NETWORK EXPANSION**
  - Length
  - Area
  - Wetlands
- **FUTURE MONITORING**

Airboat Trails



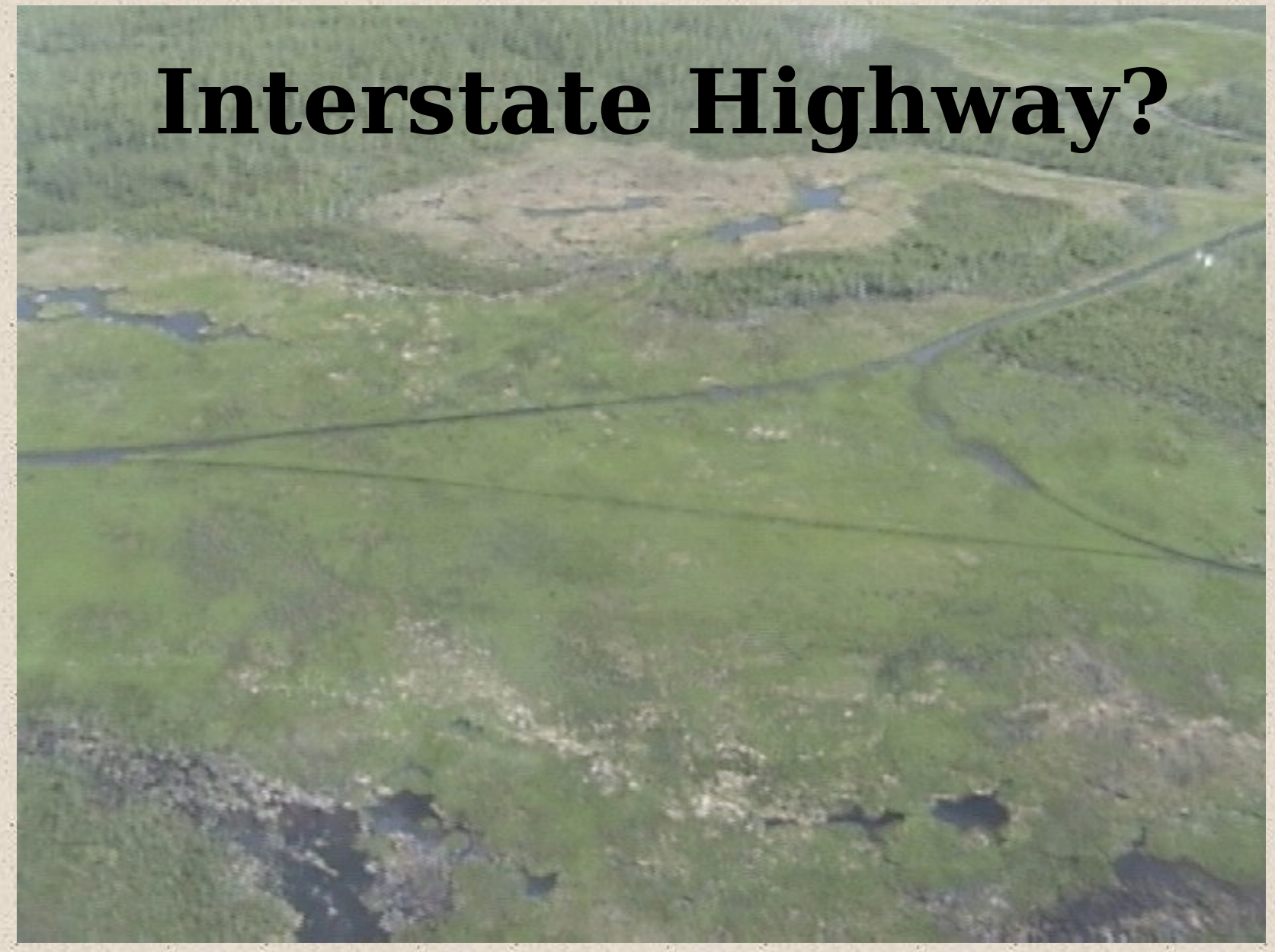
- Main Trail – channel

- Secondary Trail – compacted vegetation

- Main Trail – open water, through floating mat fens

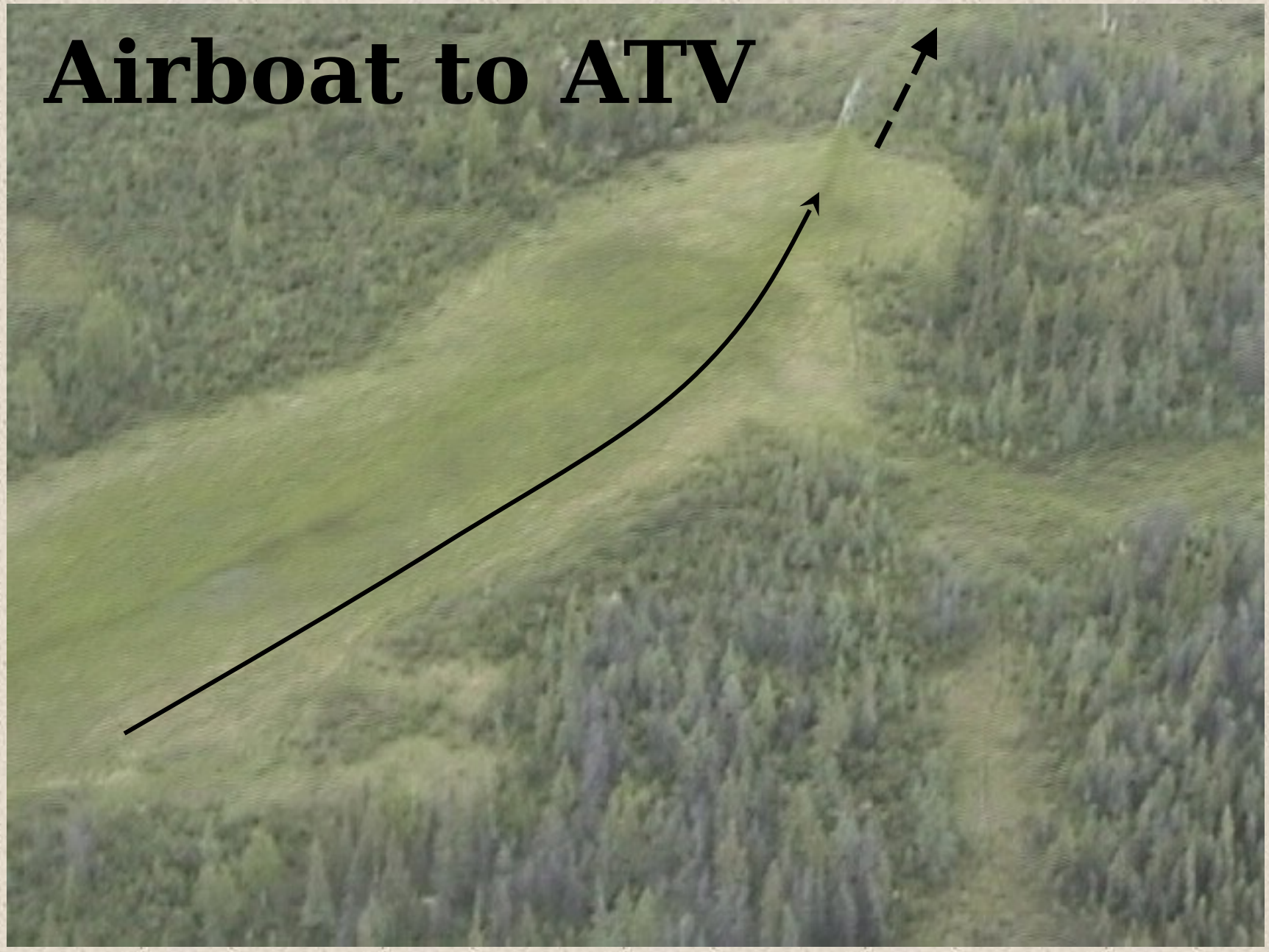
- Vegetation removed

Interstate Highway?

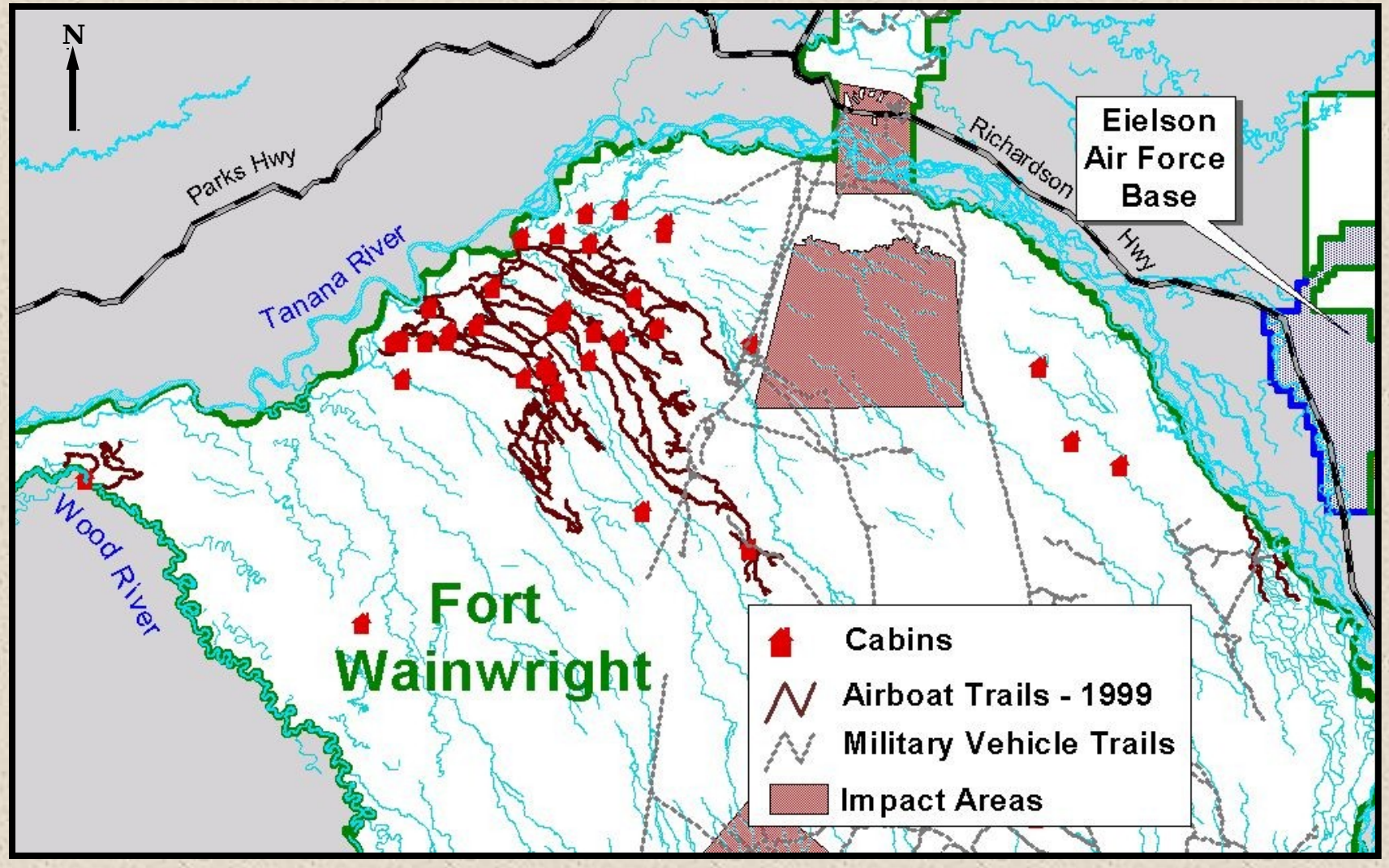


Growing Network

Extends to Fen Edges

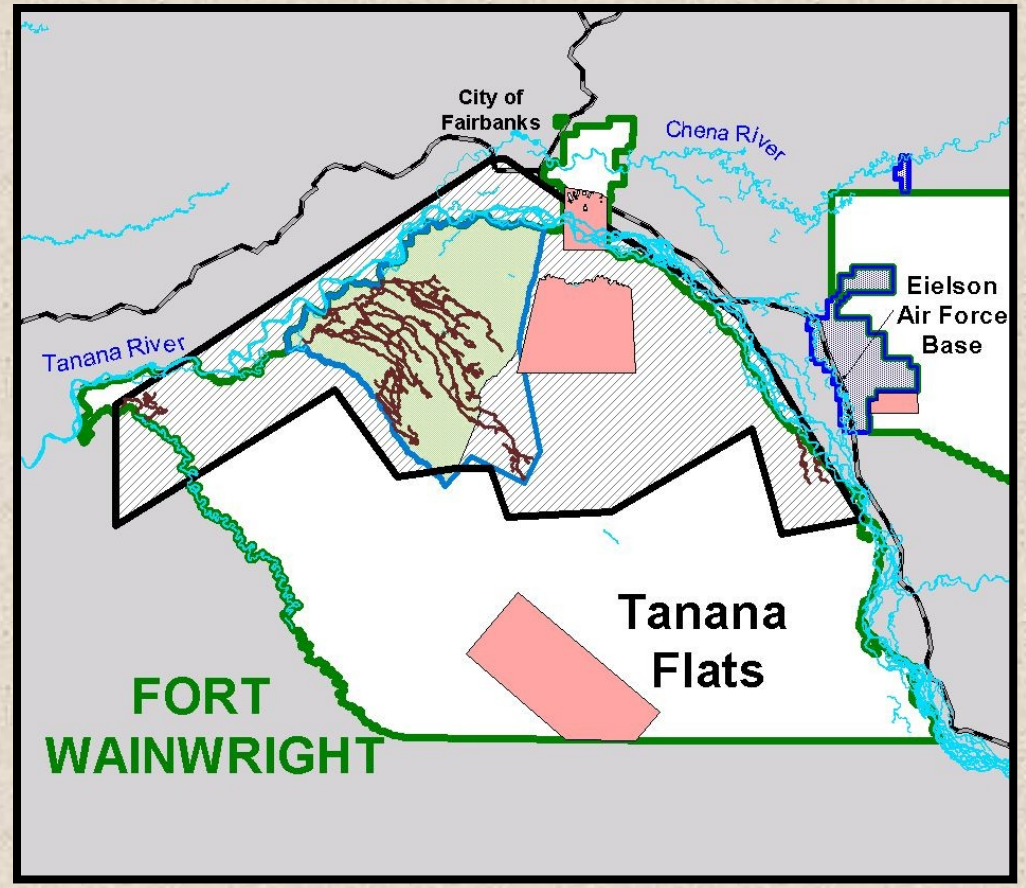

Airboat to ATV

Trespass Cabins in the Tanana Flats



Trespass Cabin

Airboat Trail Surveys: 1989 - 2001



- 1989 CRREL Study,

Study Area

- 1995 CRREL/Northern Iowa Univ./ABR Study,

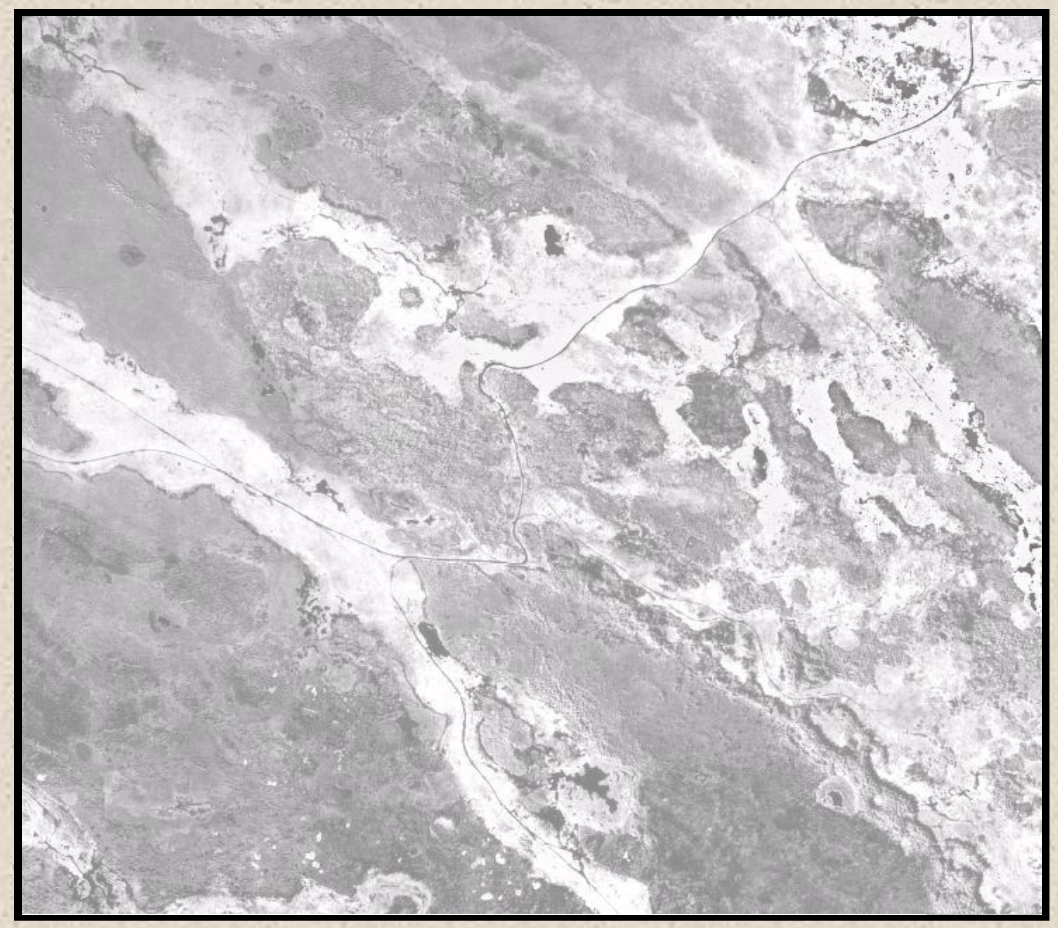
Study Area

- 2001 USARAK Study,

Aerial Surveys

Survey Methods

Photo-interpretation



- 1989 Study

true color images (September ’89)

- 1995 Study

true color images (September ’95)

- 2001 Study

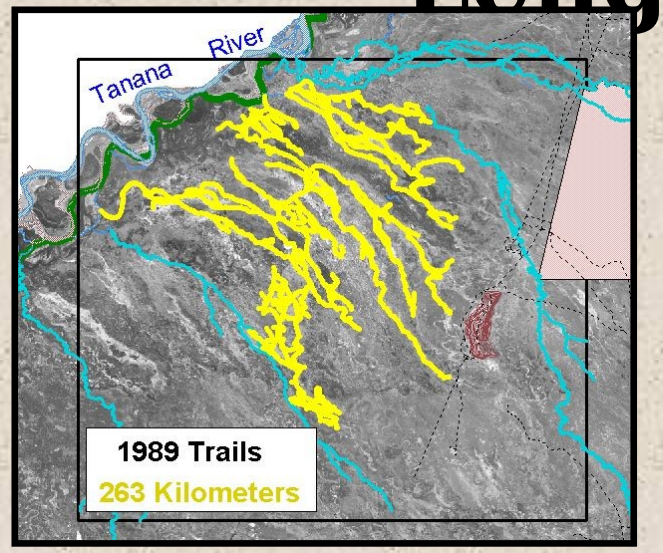
black and

Survey Methods

Aerial Observations – October 2001

- In-flight GPS Navigation
- Locate previously mapped trails (’89, ’95)
- Photograph from survey aircraft
- Map extent of new trail networks

Trail Network Expansion - Length 1989 - 1999

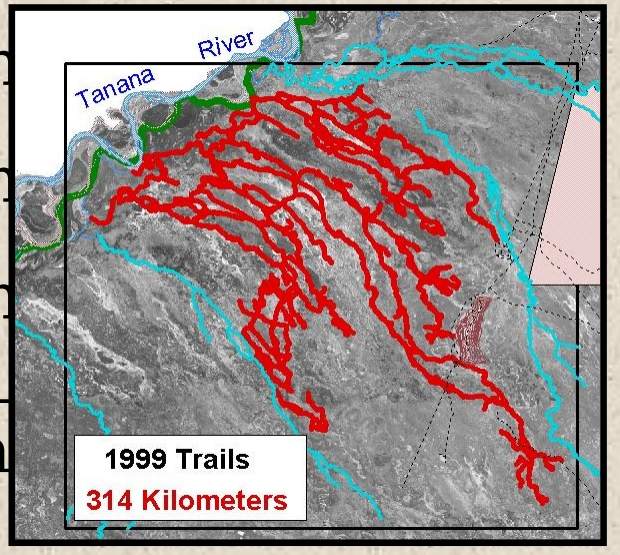


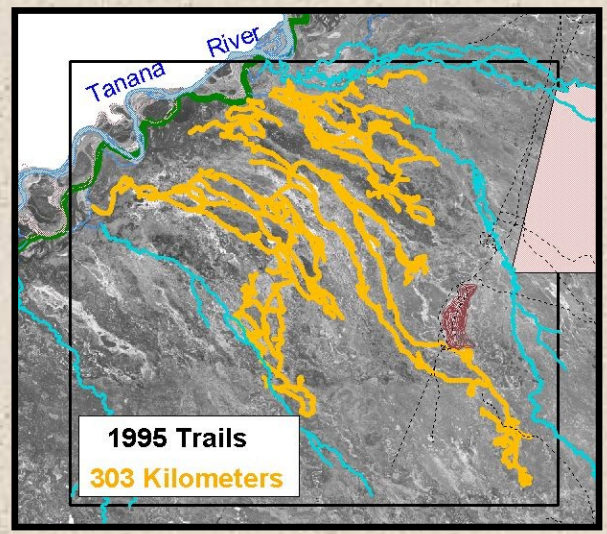
- 1989 – 263 km
- 1995 – 303 km
- 1999 – 314 km

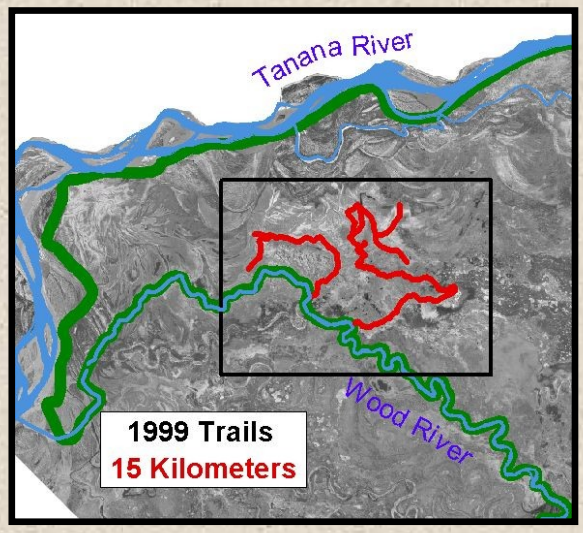
+ 2

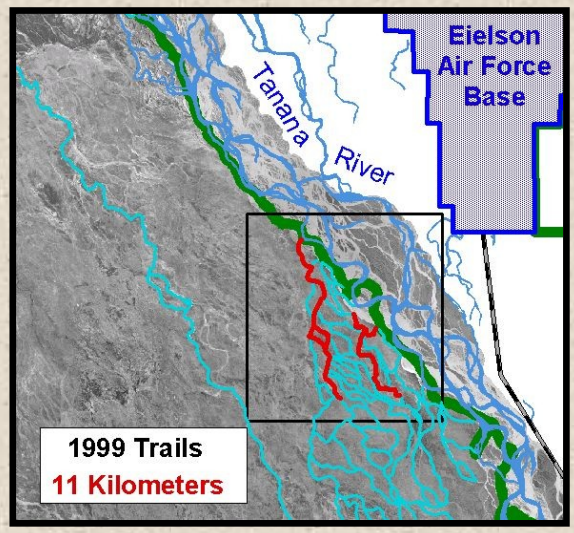
km Tota

340 km

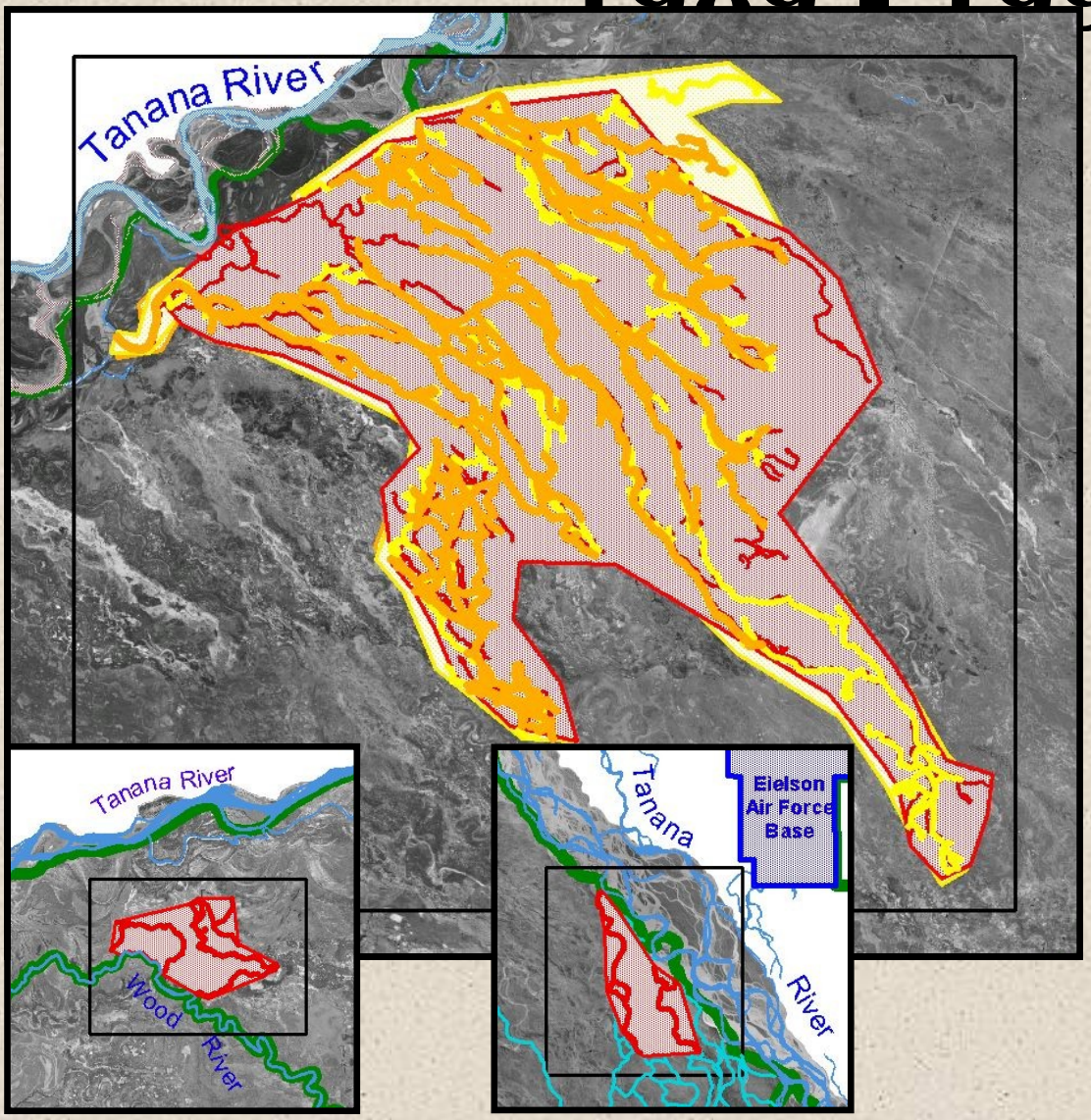








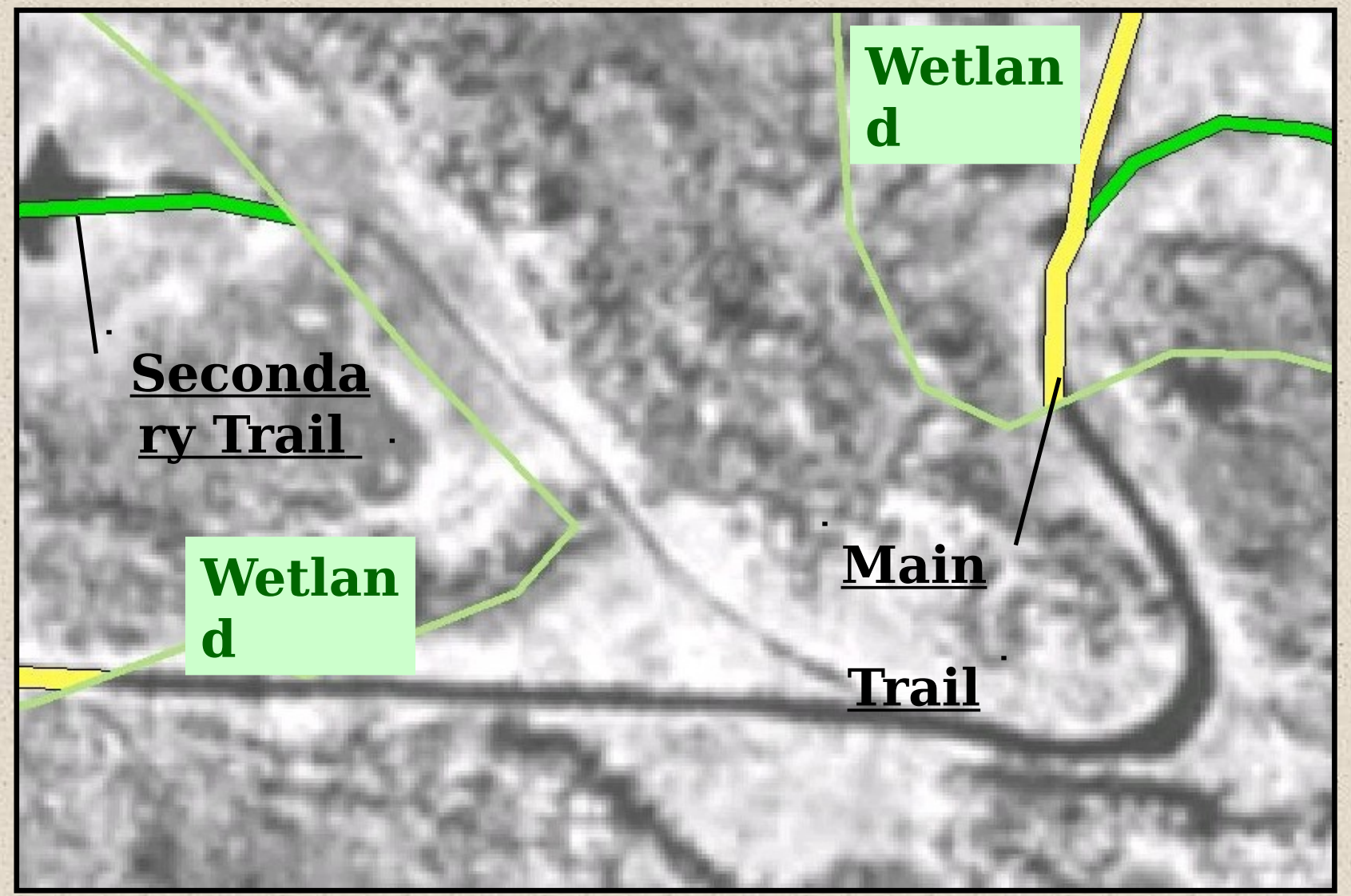
Trail Network Expansion - Area 1989 - 1999



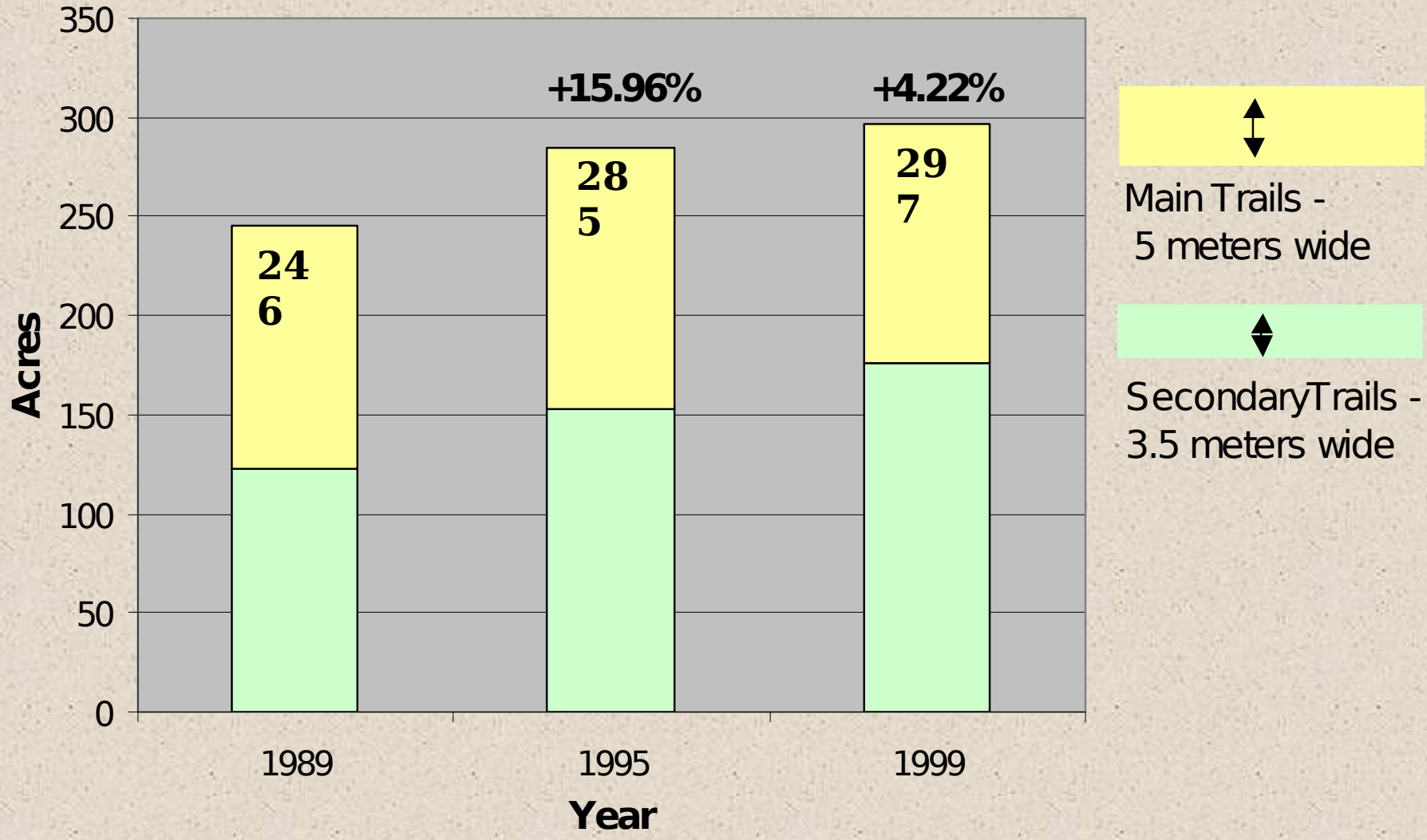
- 1989 ~ 36,000 Acres
- 1995 ~ 44,000 Acres
- 1999 ~ 44,000 Acres

West + ~ 1,600 Acres

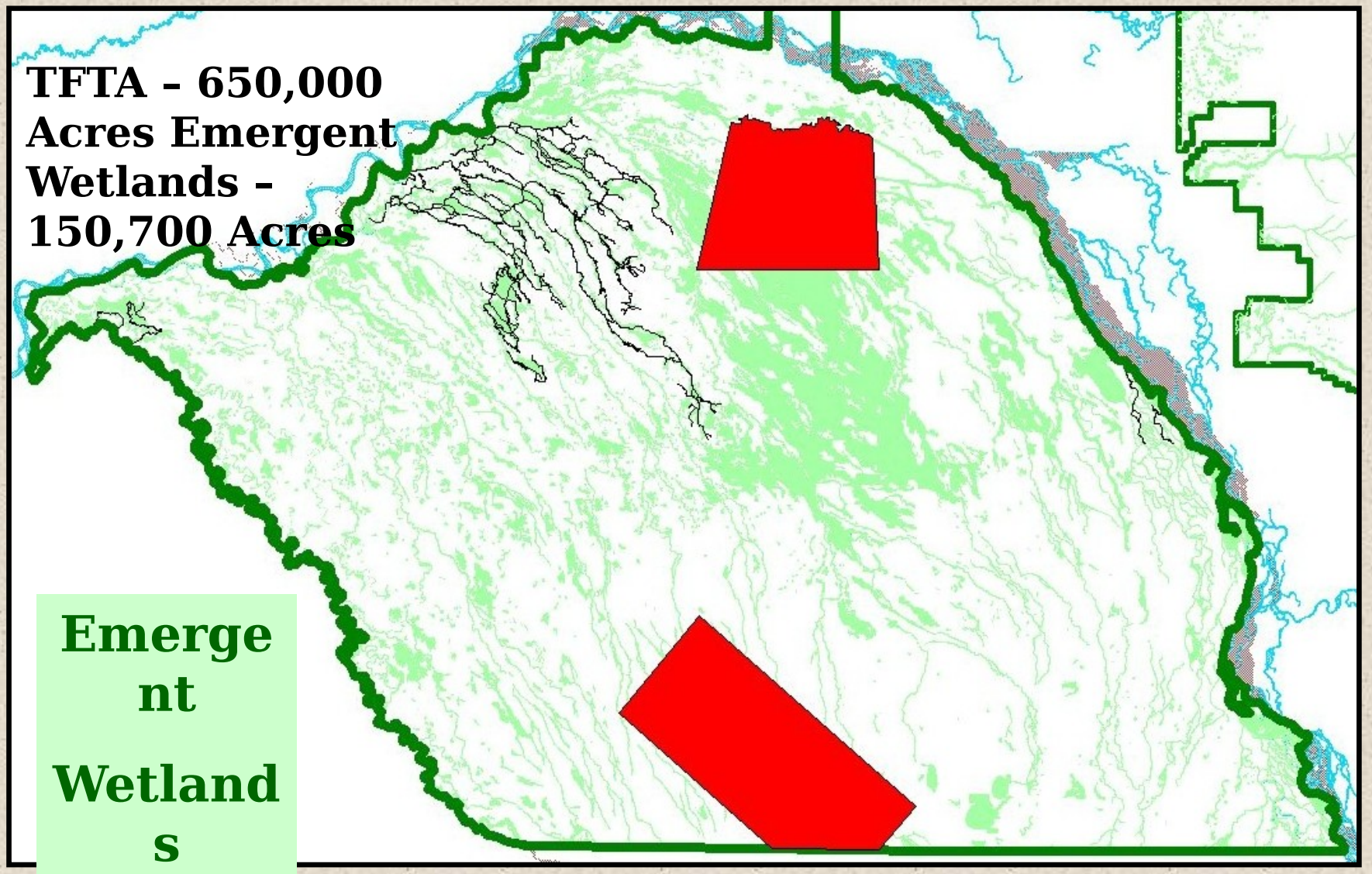
Airboat Trail Footprints



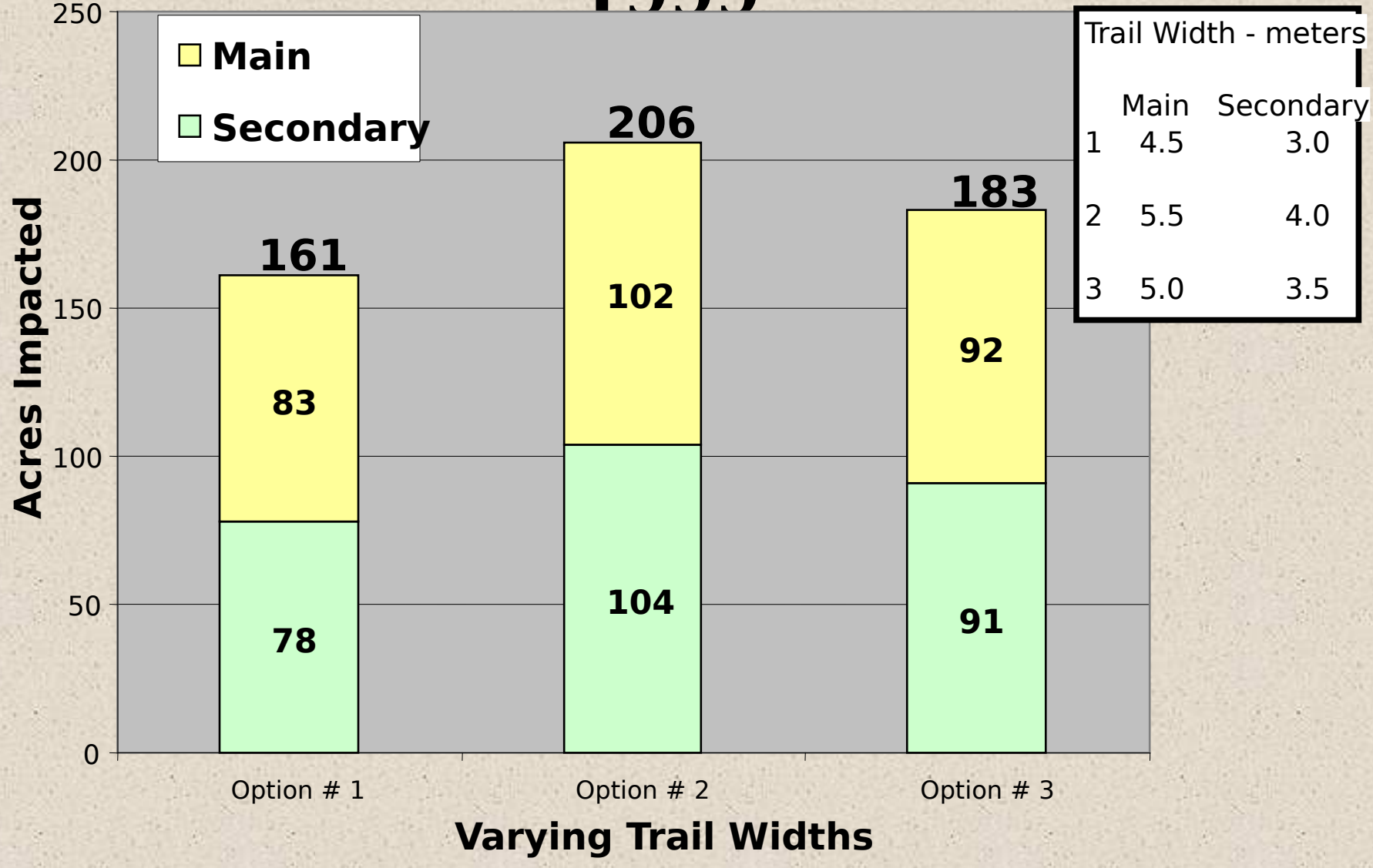
Airboat Trail Area



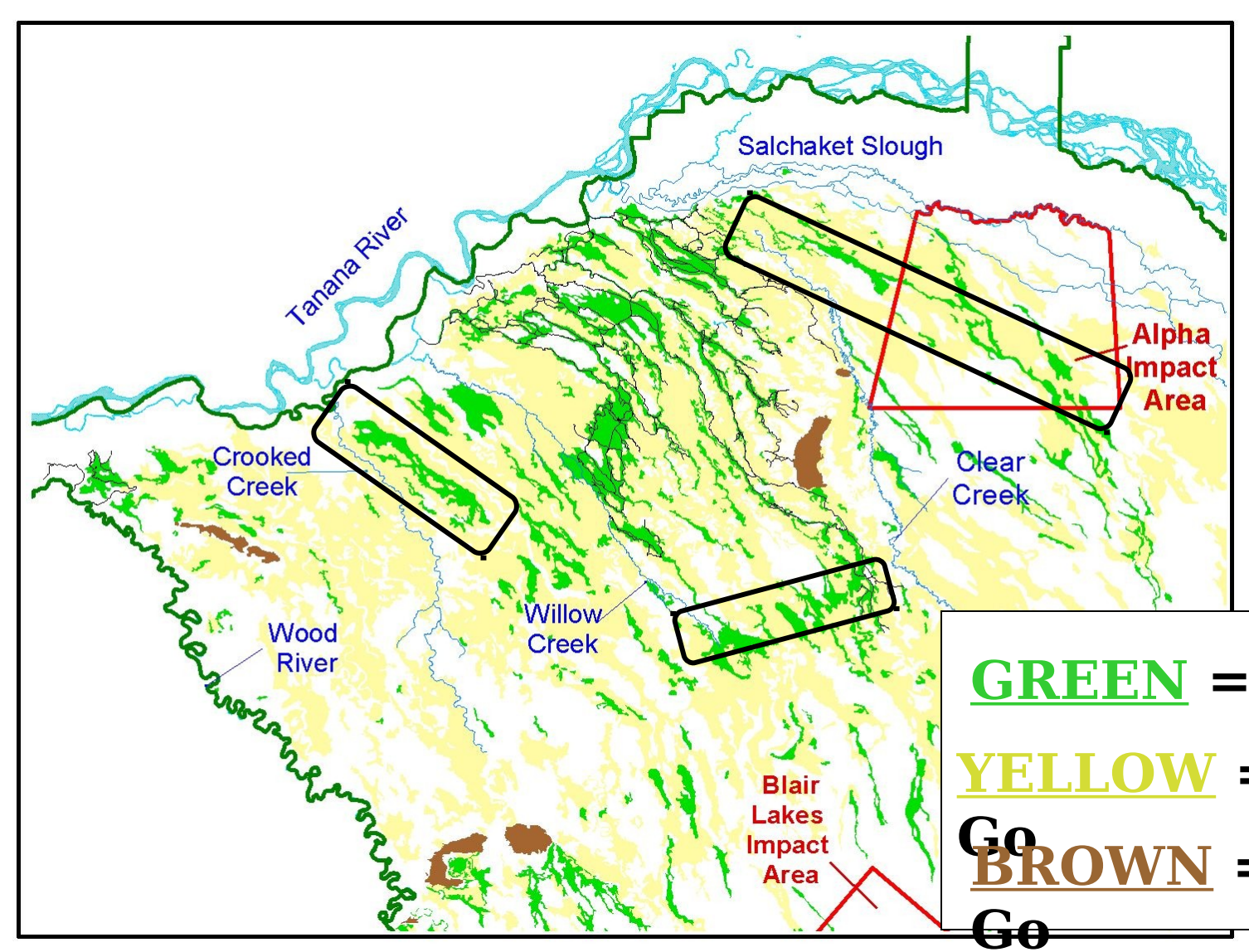
Emergent Wetlands in the Tanana Flats



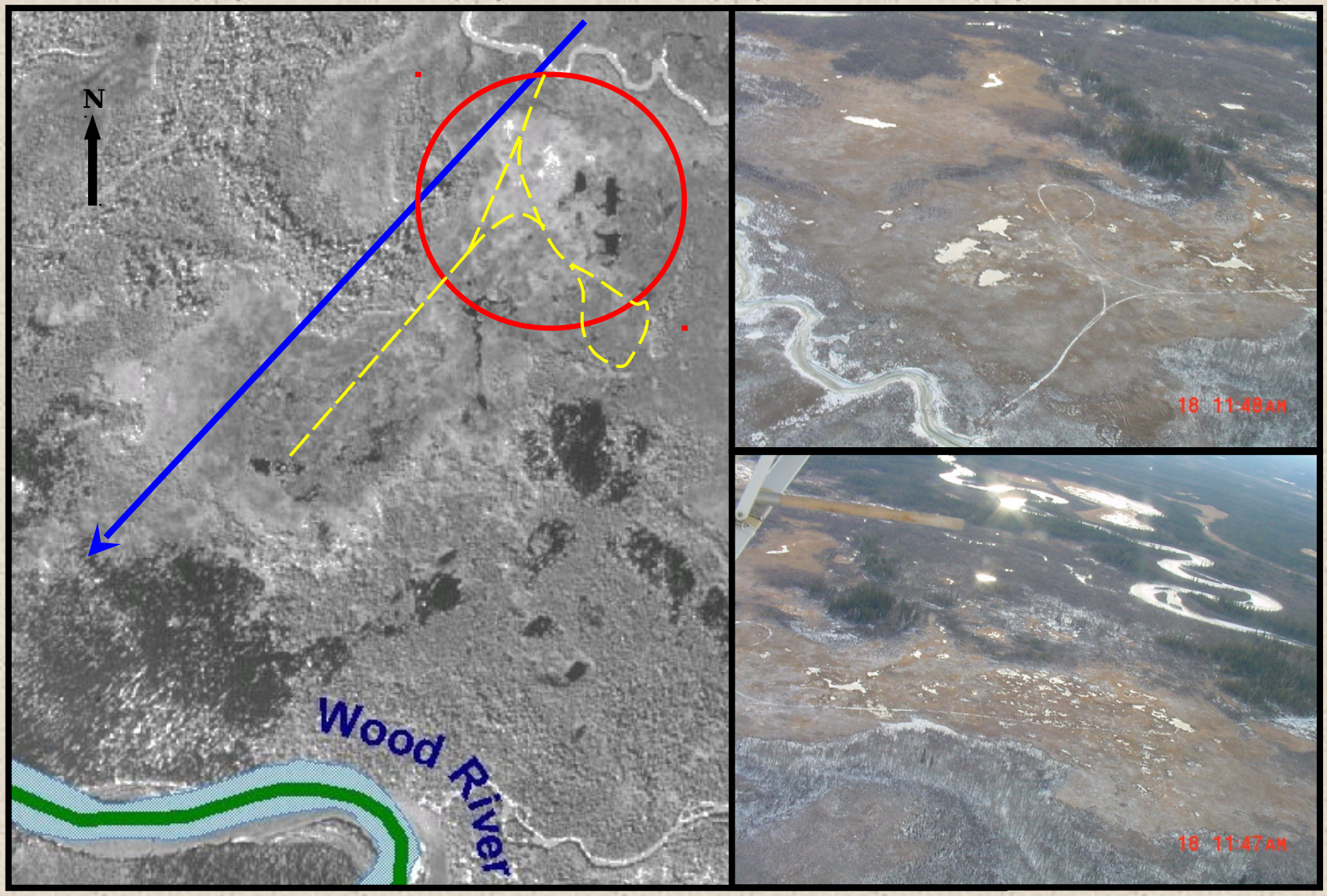
Emergent Wetland Acres (NWI) Impacted by Airboat Trails - 1999



Future Trail Network Expansion



2001 Trails – Wood River Area



Future Monitoring Options

- Annual Aerial Surveys
  - fly historic trail network perimeters, note changes
  - document new trails with photos, GPS points
- Acquire Tanana Flats imagery
  - collect every 5 years
  - photo-interpret images
- Conduct field surveys of possible trail impacts
  - Record any changes in hydrology, vegetation, wildlife

Acknowledgements and Questions

- Joe Mets,
  - Fort Richardson, Pilot
- Tony Payne
  - Fort Wainwright, Flight Support
- Steve Reidsma
  - Fort Wainwright, Airboat Support